WHAT IS CLAIMED IS:

1. A glow plug for an internal combustion engine, comprising:

a cylindrical housing having front and rear housing end portions, an inward protrusion protruding radially inwardly from the rear housing end portion, a threaded portion formed between the front and rear housing end portions for screwing the glow plug in a plug hole of the engine and a sealing portion formed on a front side of the threaded portion for engaging the housing with a given portion of the plug hole to form an airtight seal between the housing and the plug hole;

a sheath having a front sheath end portion projecting from the housing and a rear sheath end portion airtightly fixed in the front housing end portion;

a heater disposed in the sheath and generating heat upon energization thereof;

a center electrode disposed in the housing and having a front electrode end portion, a rear electrode end portion projecting from the housing and an outward protrusion protruding radially outwardly at a location between the front and rear electrode end portions, the center electrode being electronically connected at the front electrode end portion with the heater and mechanically connected with the sheath; and

a combustion pressure sensor having a pressure-sensitive element held between a front surface of the inward protrusion and a rear surface of the outward protrusion to generate an electrical signal in response to variations in stress applied thereto.

2. A glow plug according to Claim 1,

the housing having a tool engaging portion formed between the rear housing end portion and the threaded portion to be engageable with a plug mounting tool, and

the outward protrusion and the pressure-sensitive element being located radially inside the rear housing end portion.

3. A glow plug according to Claim 2, wherein the pressure-sensitive element is ring-shaped and has an inner diameter smaller than an inner diameter of the tool engaging portion of the housing.

4. A glow plug according to Claim 1, the further comprising:

an output circuit for outputting the electrical signal from the pressure-sensitive element, the output circuit including an output electrode and a lead, the output electrode being connected to the pressure-sensitive element and having a portion protruding radially outwardly from the housing, the lead being connected to the protruding portion of the output electrode and extending axially reawardly; and

a protective cover covering therein the rear housing end portion and the output circuit and having an open rear end through which the lead extends externally of the protective cover.

5. A glow plug according to Claim 1, further comprising a resinous sealant to seal therein the rear housing end portion.

6. A method of manufacturing a glow plug, comprising:

disposing a heater in a sheath;

fitting a rear end portion of the sheath into a cylindrical housing shell, the housing shell having a rear end portion formed with a sensor seat on an inner surface thereof;

inserting an electrode rod into the housing shell;

after said inserting, placing a first piece that defines an outward protrusion on the electrode rod, a pressure-sensitive element and a second piece that defines an inward protrusion on the housing shell, on the sensor seat of the housing shell so as to hold the pressure-sensitive element between a rear surface of the outward protrusion and a front surface of the inward protrusion;

while pushing the second piece toward the front and applying

compressive stress to the pressure-sensitive element, fixing the second piece to the housing shell; and

fixing the first piece to the electrode rod.

7. A method according to Claim 6, further comprising interposing an insulating member between the seat face and the outward protrusion.

8. A method according to Claim 6, wherein the first piece has a rear end located in a rear side of the rear end portion of the housing when placed on the sensor seat, and fixed at the rear end to the electrode rod.

9. A glow plug for an internal combustion engine, comprising:

a cylindrical housing having a threaded portion for screwing the glow plug into a plug hole of the engine and a sealing portion formed on a front side of the threaded portion for engaging the housing with a given portion of the plug hole to form an airtight seal between the housing and the plug hole;

a sheath having a front sheath end portion projecting from the housing and a rear sheath end portion airtightly fixed in the housing;

a heater disposed in the sheath and generating heat upon energization thereof;

a center electrode disposed in the housing and having a rear electrode end portion projecting from the housing, the center electrode being electrically connected with the heater and mechanically connected with the sheath or the sheath and the heater; and

a combustion pressure sensor including a pressure-sensitive element that converts an axial displacement of the sheath or the sheath and the heater caused by a variation in combustion pressure into an electrical signal and being configured to have compressive stress increasingly applied to the pressure-sensitive element by screwing the glow plug into the plug hole and increased with increase in the combustion pressure.

10. A glow plug according to Claim 9, wherein the pressure-sensitive element is ring-shaped and has an inner diameter smaller than an inner diameter of the threaded portion of the housing.